

<b>GRS:</b>	Plum Island Rear Range Light	<b>GRS #</b>	A24
<b>Protection Priority Sites / Ranking:</b>		Medium (B)	
<b>LOCATION INFORMATION</b>			
<b>State:</b> Wisconsin		<b>County:</b> Door	
<b>CONTACT INFORMATION</b>			
EPA Spill Hotline: 312-353-2318 Veolia Environmental Services: 920-743-1097 Sister Bay/ Liberty Grove Fire Department: 920-854-4021 Washington Island Fire Department (Ephraim): 920-854-4022 Sturgeon Bay Fire Department: 920-746-2916 Village of Sister Bay: 920-854-4118 USCG Station Sturgeon Bay: 920-743-3367 USCGC Mobile Bay: 920-743-2646 USCG Sector Lake Michigan Command Center: 414-747-7182 Wisconsin Department of Natural Resource : 1-800-847-9367 Wisconsin Department of Natural Resource Spill Emergency Hotline: 1-800-943-0003			
<b>RESOURCES AT RISK CHARACTERISTICS</b>			
<b>Managed Areas:</b>	Grand Traverse Island State Park		
<b>Shoreline Type:</b>	Fringing Wetlands and Extensive Wetlands on N side of Plum Island, Exposed Rocky Cliffs, Gravel Beaches, Sandy Beaches		
<b>Sensitive Habitat:</b>	Richters Point, Lobdells Point, Detroit Harbor State Natural Area		
<b>Wildlife:</b>	Terrestrial Plants, Aquatic Plants, Migratory Birds, Salmonids, Walleye, Yellow Perch		
<b>Federally Threatened / Endangered Species:</b>	Dwarf Lake Iris (T), Pitcher's Thistle (T), Hine's Emerald Dragonfly (E), Northern Long-eared Bat (T)		
<b>Socio-Economic Resources:</b>	Door County Washington Island Ferry travels to the W of Plum Island, Northpoint Pier		
<b>SPILL RESPONSE</b>			
<b>Predicted Behavior:</b>	<p><b>Sea Conditions:</b> Worst in October and November, when, lakewide, wave heights of 5 to 10 feet are encountered about 35 percent of the time. In October, S through SW winds are most often responsible, while by November W through N winds often generate rough seas. Seas of 10 feet or more are encountered 3 to 5 percent of the time from November through March. Extreme waves of 20 to 22 feet have been encountered. During the spring, high seas are infrequent, but 5- to 10-foot seas develop 15 to 30 percent of the time in the S and 20 to 40 percent in the N. Summer seas climb above 10 feet less than 1 percent of the time, while those in the 5- to 10-foot category drop to less than 20 percent in June and July. By August, the fall buildup begins.</p> <p><b>Winds:</b> Coastal winds are more localized and variable. Along the Lake Michigan shore, spring winds are variable, particularly in the morning, when northerlies, easterlies, and southerlies are among the most common. By afternoon, aided by a lake-breeze effect, there are a preponderance of winds out of the S, particularly with the approach of summer. Summer also brings a slackening of windspeeds. The likelihood of encountering winds of 28 knots or more falls from a 4- to 10-percent chance in March to less than 3 percent by May. However, Green Bay recorded a 95-knot southwesterly one May; it is not unrealistic to expect a wind extreme of 100 knots or more over open waters. Spring winds can still blow strong, with winds of 28 knots or more encountered about 4 to 8 percent of the time. They do slacken from their</p>		

	<p>winter fierceness, with southerlies and southwesterlies becoming more frequent and northerlies less so as summer approaches. Strong winds are infrequent in summer and mostly associated with thunderstorms. S and SW winds prevail particularly in the N southeasterlies are also common in the S. Northerlies are a secondary wind.</p> <p><b>Fog:</b> The shores of Lake Michigan are subject to varying amounts of fog. Upwelling along the northwest shores increases the possibility of advection fog in the spring and summer.</p>
<b>Response Considerations:</b>	<p><b>Ice:</b> The first waters to form an extensive ice cover are Green Bay and the Bays de Noc. These buildups are aided by windrows resulting from prevailing winds and currents. In a normal winter, an early ice cover is established by the end of January and includes the above-mentioned waters plus the extreme S part of the lake. The surface features and location of the ice fields change as a direct function of the wind. Shores exposed to the full force of the wind often have large ice fields of very heavy brash extending 1 to 2 miles offshore. In addition, a circular current pattern in the S part of the lake distributes drifting floes along the shore. Even during a mild winter, these floes can build out 10 to 15 miles into the lake. A mild winter on Lake Michigan means about 10-percent coverage compared to an average 40-percent coverage and an 80-percent coverage during a severe winter. Maximum ice coverage occurs by mid-March, on the average, while decay begins a week or two later.</p> <p><b>Water Temperature:</b> The W shore waters in general are 5 to 10 degrees cooler than the E shore waters.</p> <p><b>Harbors:</b> The harbors on the W side of the lake are generally at the mouths of small rivers, the only large streams being the Fox and Menominee Rivers which empty into Green Bay. The entrances to the harbors are generally protected by parallel piers, and some have been provided with stilling basins. Some harbor entrances are protected by detached breakwaters. The most important harbors in Lake Michigan are Muskegon, Calumet, Chicago, Milwaukee, Kenosha, and Green Bay</p>

**Recommended Spill Response Strategy Table**

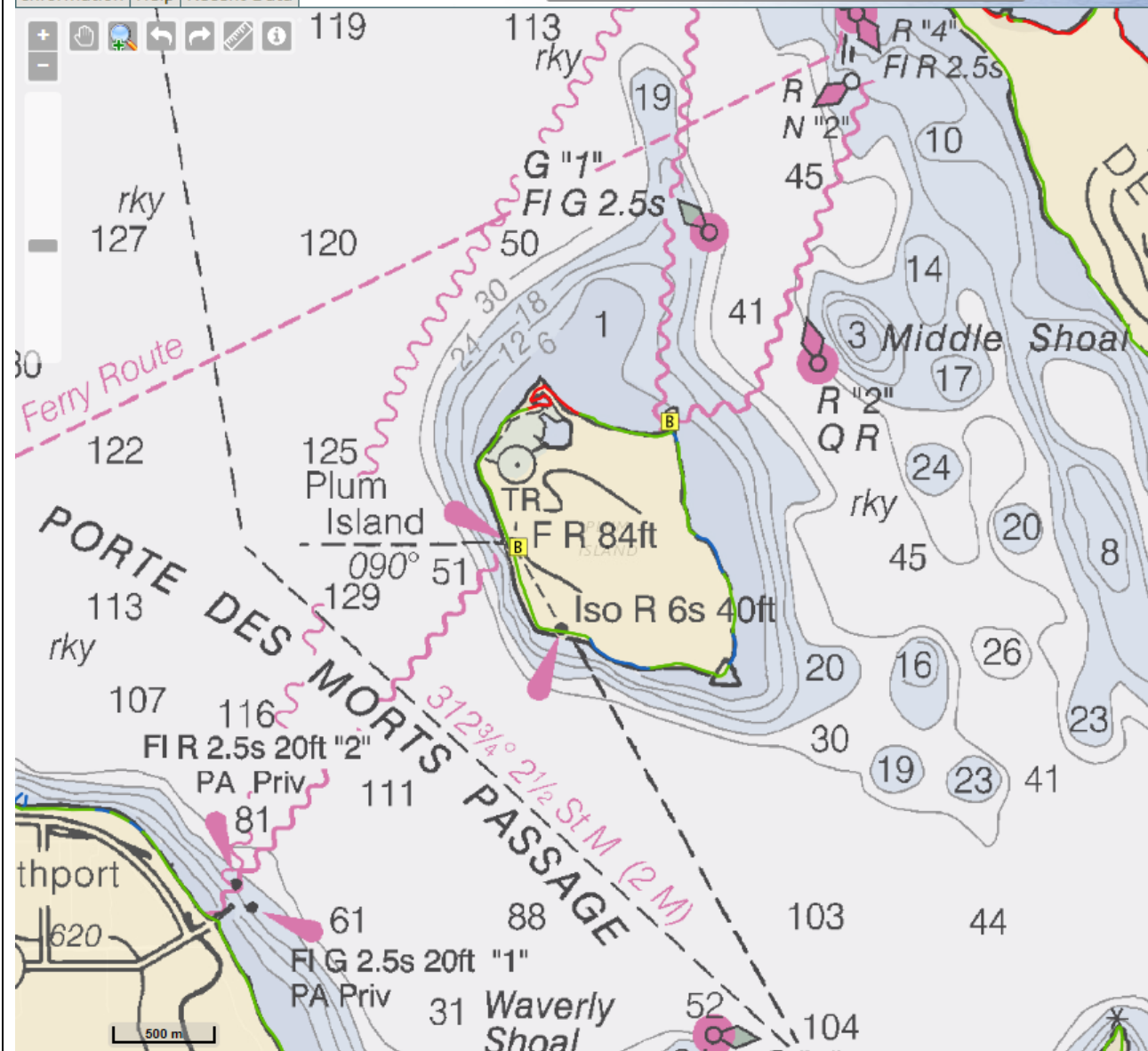
Site ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Response Strategy	Implementation	Min Boom Length	Staging Area	Boat Access	Land Access	Priority	Date Last Verified	State	County	Sector	Address
Plum Island Range Rear Light (A24)	45.3075	-86.9578	Exclusion	On Land Lay boom on beach no impact to actual structure	1000'	Sawyer Park 421 Michigan St., Sturgeon Bay WI 54235	Liberty Grove Boat Ramp, 12030 Cedar Road, Ellison Bay, WI 54210	none	Medium	1-Dec-16	WI	Door	SLM	Plum Island Range Rear Range Lighthouse, Washington, WI 54246

## LOGISTICS

**Logistics Support Table**

Name	Type	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Address	County	Owner / POC	Access Limitations	Description	State	Sector
Sawyer Park	Staging Area	44.8288 N	087.3813 W	Sawyer Park 421 Michigan St., Sturgeon Bay, WI 54235	Door	WI DNR	None	Public Boat ramp with large parking lot	WI	SLM

Liberty Grove	Boat ramp	45.2546N	87.0747 W	12030 Cedar Road, Ellison Bay, WI 54210	Door	State of WI	None	Public boat ramp	WI	SLM
<b>COMMENTS</b>										
<ul style="list-style-type: none"><li>- The United States Fish and Wildlife Service closed Plum Island to public access to "ensure necessary protection of ground nesting migratory birds." The life-saving station can be seen at a distance from the Northport-Washington Island ferry.</li></ul>										
<b>GRP/GRS MAP</b>										



↑N Scale: 1 : 19,027

Zoom Level: 14

**Location:** 45.3272°, -86.9875°

clean >

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Esri Light Gray Canvas

Esri Light Gray Canvas

### Raster Navigational Charts (RNC) (NOAA)

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ISA Shoreline Sensitivity (ESI), MI

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 None

Low

 Medium

 High

**DRAFT-Staging Areas (last updated 23-May-2016)**

**DRAFT-Staging Areas (last updated 23-May-2016)**

⑤ Staging Areas (last updated 23-May-2016)

**DRAFT-Boat Ramps (last updated 2016 0523)**

DRAFT-Boat Ramps (last updated 2016 0523)

 Milwaukee (Sector proper)

MSU Chicago

DD Grand Haven

MSD Sturgeon Bay

**DRAFT - Logistics Support Sites (updated 14-Mar-2017)**

DRAFT - Logistics Support Sites (updated 14-Mar-2017)

● DRAFT – Logistics Support Sites (updated 14-Mar-2017)

DRAFT - Priority Strategy Sites (updated 14-Mar-2017)

DRAFT - Priority Strategy Sites (updated 14-Mar-2017)

**A** A – Highest Protection Priority

**B** B – Protect after A Areas

**C** C – Protect after B Areas